



[4910-13-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2018-0555; Product Identifier 2017-NM-152-AD]**

**RIN 2120-AA64**

**Airworthiness Directives; BAE Systems (Operations) Limited Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** We propose to adopt a new airworthiness directive (AD) for all BAE Systems (Operations) Limited Model 4101 airplanes. This proposed AD was prompted by a report of an improperly installed spacer around the electrical pins in the cartridge connector for the fire bottle extinguisher cartridge. This proposed AD would require repetitive inspections for excessive or missing spacers, and applicable corrective actions. We are proposing this AD to address the unsafe condition on these products.

**DATES:** We must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: 202-493-2251.

- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this NPRM, contact BAE Systems (Operations) Limited, Customer Information Department, Prestwick International Airport, Ayrshire, KA9 2RW, Scotland, United Kingdom; telephone +44 1292 675207; fax +44 1292 675704; email [RAPublications@baesystems.com](mailto:RAPublications@baesystems.com); Internet <http://www.baesystems.com/Businesses/RegionalAircraft/index.htm>. You may view this service information at the FAA, Transport Standards Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2018-0555; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this NPRM, the regulatory evaluation, any comments received, and other information. The street address for the Docket Operations office (telephone 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

**FOR FURTHER INFORMATION CONTACT:** Todd Thompson, Aerospace Engineer, International Section, Transport Standards Branch, FAA, 2200 South 216th St., Des Moines, WA 98198; telephone and fax 206-231-3228.

**SUPPLEMENTARY INFORMATION:**

**Comments Invited**

We invite you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2018-0555; Product Identifier 2017-NM-152-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this NPRM. We will consider all comments received by the closing date and may amend this NPRM based on those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this NPRM.

**Discussion**

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Union, has issued EASA AD 2017-0212, dated October 25, 2017 (referred to after this as the Mandatory Continuing Airworthiness Information, or “the MCAI”), to correct an unsafe condition for all BAE Systems (Operations) Limited Model 4101 airplanes. The MCAI states:

During scheduled maintenance (fire bottle extinguisher cartridge resistance check) it was noted that on the extinguisher cartridge, the blue spacer around the electrical pins appeared to be located too far forward. It was discovered that, inadvertently, an additional spacer (possibly from a previous extinguisher cartridge) was located in the extinguisher cartridge connector. This effectively shortens the electrical pins in the cartridge connector, which could result in insufficient engagement with the associated sockets on the aeroplane connector. A missing spacer would not affect the electrical connection between the extinguisher cartridge and the aeroplane wiring, but could allow moisture ingress over time.

Both conditions, if not detected and corrected, could prevent the fire extinguisher bottle from discharging when required, possibly resulting in damage to the aeroplane and injury to occupants.

To address this potential unsafe condition, BAE Systems (Operations) Ltd issued Service Bulletin (SB) J41-26-009, providing inspection instructions to ensure that a single blue spacer is fitted on the inside of the extinguisher cartridge connector.

For the reason described above, this [EASA] AD requires a one-time [general visual] inspection [and inspection after a maintenance task that involves disconnection or re-connection of the electrical connector] of the extinguisher cartridge electrical connector and the aeroplane's electrical connector and, depending on findings, removal of excessive spacers or replacement of the fire extinguisher bottle.

You may examine the MCAI in the AD docket on the Internet at

<http://www.regulations.gov> by searching for and locating Docket No. FAA-2018-0555.

### **Related Service Information under 1 CFR part 51**

BAE Systems (Operations) Limited has issued Service Bulletin J41-26-009, dated November 23, 2016. This service information describes procedures for a general visual inspection of the cartridge electrical connector and the aircraft electrical connector for

missing or excessive spacers, and corrective actions including removing excessive spacers or replacing the fire bottle extinguisher cartridge. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

#### **FAA's Determination and Requirements of this Proposed AD**

This product has been approved by the aviation authority of another country, and is approved for operation in the United States. Pursuant to our bilateral agreement with the State of Design Authority, we have been notified of the unsafe condition described in the MCAI and service information referenced above. We are proposing this AD because we evaluated all pertinent information and determined an unsafe condition exists and is likely to exist or develop on other products of the same type design.

#### **Costs of Compliance**

We estimate that this proposed AD affects 4 airplanes of U.S. registry.

We estimate the following costs to comply with this proposed AD:

##### **Estimated costs for required actions**

<b>Labor cost</b>	<b>Parts cost</b>	<b>Cost per product</b>	<b>Cost on U.S. operators</b>
1 work-hour X \$85 per hour = \$85	\$0	\$85	\$340

We estimate the following costs to do any necessary on-condition actions that would be required based on the results of any required actions. We have no way of determining the number of aircraft that might need these on-condition actions:

### Estimated costs of on-condition actions

Labor cost	Parts cost	Cost per product
1 work-hour X \$85 per hour = \$85	Up to \$1,734	Up to \$1,819

#### Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. "Subtitle VII: Aviation Programs," describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in "Subtitle VII, Part A, Subpart III, Section 44701: General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

This proposed AD is issued in accordance with authority delegated by the Executive Director, Aircraft Certification Service, as authorized by FAA Order 8000.51C. In accordance with that order, issuance of ADs is normally a function of the Compliance and Airworthiness Division, but during this transition period, the Executive Director has delegated the authority to issue ADs applicable to transport category airplanes to the Director of the System Oversight Division.

## **Regulatory Findings**

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

1. Is not a “significant regulatory action” under Executive Order 12866;
2. Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);
3. Will not affect intrastate aviation in Alaska; and
4. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

## **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

## **The Proposed Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

## **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

**§ 39.13 [Amended]**

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

**BAE Systems (Operations) Limited:** Docket No. FAA-2018-0555; Product Identifier 2017-NM-152-AD.

**(a) Comments Due Date**

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to BAE Systems (Operations) Limited Model 4101 airplanes, certificated in any category, all serial numbers.

**(d) Subject**

Air Transport Association (ATA) of America Code 26, Fire protection.

**(e) Reason**

This AD was prompted by a report of an improperly installed spacer around the electrical pins in the cartridge connector for the fire bottle extinguisher cartridge. We are issuing this AD to detect and correct excessive or missing spacers, which could result in the fire extinguisher bottle not discharging when required, possibly resulting in damage to the airplane.



**(f) Compliance**

Comply with this AD within the compliance times specified, unless already done.

**(g) Inspection**

Within 12 months after the effective date of this AD, do a general visual inspection of the inside of the cartridge electrical connector and the inside of the airplane electrical connector in accordance with the Accomplishment Instructions of the BAE Systems (Operations) Limited Service Bulletin J41-26-009, dated November 23, 2016.

**(h) Inspections after Maintenance**

As of the effective date of this AD, before further flight after each accomplishment of a maintenance task involving disconnection or (re-)connection of an electrical connector of a fire bottle extinguisher cartridge, do a general visual inspection of the inside of the cartridge electrical connector and the inside of the airplane electrical connector in accordance with the Accomplishment Instructions of BAE Systems (Operations) Limited Service Bulletin J41-26-009, dated November 23, 2016.

**(i) Corrective Actions**

(1) If, during any inspection as required by paragraph (g) or (h) of this AD, as applicable, more than one spacer is found inside the cartridge electrical connector: Before further flight, remove the excessive spacer(s) from the inside of the cartridge electrical connector in accordance with the Accomplishment Instructions of BAE Systems (Operations) Limited Service Bulletin J41-26-009, dated November 23, 2016.

(2) If, during any inspection as required by paragraph (g) or (h) of this AD, as applicable, one or more spacers are found inside the airplane electrical connector: Before

further flight, remove all spacers from the inside of the airplane electrical connector in accordance with the Accomplishment Instructions of BAE Systems (Operations) Limited Service Bulletin J41-26-009, dated November 23, 2016.

(3) If, during any inspection as required by paragraph (g) or (h) of this AD, as applicable, no blue spacer is found inside the cartridge electrical connector body: Before further flight, replace the cartridge in accordance with the Accomplishment Instructions of the BAE Systems (Operations) Limited Service Bulletin J41-26-009, dated November 23, 2016.

**(j) Other FAA AD Provisions**

The following provisions also apply to this AD:

**(1) Alternative Methods of Compliance (AMOCs):** The Manager, International Section, Transport Standards Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the International Section, send it to the attention of the person identified in paragraph (k)(2) of this AD. Information may be emailed to: 9-ANM-116-AMOC-REQUESTS@faa.gov. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

**(2) Contacting the Manufacturer:** For any requirement in this AD to obtain corrective actions from a manufacturer, the action must be accomplished using a method

approved by the Manager, International Section, Transport Standards Branch, FAA; or the European Aviation Safety Agency (EASA); or BAE Systems (Operations) Limited's EASA Design Organization Approval (DOA). If approved by the DOA, the approval must include the DOA-authorized signature.

**(k) Related Information**

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) EASA AD 2017-0212, dated October 25, 2017; for related information. This MCAI may be found in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2018-0555.

(2) For more information about this AD, contact Todd Thompson, Aerospace Engineer, International Section, Transport Standards Branch, FAA, 2200 South 216th St., Des Moines, WA 98198; telephone and fax 206-231-3228.

(3) For service information identified in this AD, contact BAE Systems (Operations) Limited, Customer Information Department, Prestwick International Airport, Ayrshire, KA9 2RW, Scotland, United Kingdom; telephone +44 1292 675207; fax +44 1292 675704; email [RApublications@baesystems.com](mailto:RApublications@baesystems.com); Internet <http://www.baesystems.com/Businesses/RegionalAircraft/index.htm>. You may view this service information at the FAA, Transport Standards Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

Issued in Des Moines, Washington, on June 19, 2018.

Michael Kaszycki,  
Acting Director,  
System Oversight Division,  
Aircraft Certification Service.  
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